

IN THE SPECIFICATION:

On page 6, please amend the paragraph beginning at line 12 as follows:

--The constraints are to ~~minimise~~minimize the size of the quality metrics report that will be sent to the streaming server and, the complexity for the terminal.--

On page 8, please amend the paragraph beginning at line 1 as follows:

--It is required to set the sending rate. If the *Sending-rate* value is 0, then the streaming client can send feedback messages at any time depending on ~~the events occurred~~occurring in the streaming client. Values  $\geq 1$  indicate a precise message-sending interval. The shortest interval is once a second and the longest interval is undefined. The feedback sending interval can be different for different ~~medium~~media, but it is recommended to keep a sort of synchronization, to avoid extra traffic in the uplink direction. The value *End* indicates that only one message is sent at the end of the session. The *Range* field can be used to define the time limit of feedback sending. In this way it is possible to decide the monitoring time range during the negotiation phase.--

On page 10, please amend the paragraph beginning at line 21 as follows:

--~~It is proposed a~~A method is provided for reporting a streaming quality, wherein at least one continuous media stream is streamed to a client, and wherein said streaming is controlled by a protocol that is operated between said client and a server, comprising selecting at least one quality metric and a quality metrics class from a pre-defined set of at least two quality metrics classes, and reporting to said server the quality of said streaming based on said at least one selected quality metric and said selected quality metrics class.--

At page 12, please amend the paragraph beginning at line 9 as follows:

--Thus according to a first aspect of the present invention, the incorporation of additional quality metrics classes restricts the interpretation of the quality metrics definitions and thus contributes to make the quality reports more significant and concise. According to a second aspect of the present invention, the incorporation of said additional quality metrics classes adds an additional degree of freedom in the definition of quality metrics. For instance, if a corruption duration, which, inter alia, depends on the decision whether frames of said continuous media stream are good frames or corrupted frames, is selected as quality metric, this quality metric can be further ~~speeialised~~specialized by the selection of the quality metrics class, which may for instance provide a variety of definitions of a good frame. Thus, without ~~loosing~~loosening conciseness of the quality metric itself, because each definition of a good frame according to the quality metrics class is fixedly prescribed, the scope of application of the quality metric is extended.--

At page 13, please amend the paragraph beginning at line 27 as follows:

--According to the method of the present invention, it may be preferred that said quality metrics class field is located in a header section of said at least one protocol data unit. Alternatively, it may also be ~~compries~~comprised in the payload section of said at least one protocol data unit.--

At page 16, please amend the paragraph beginning at line 14 and ending on page 17, line 10 as follows:

--According to the method of the present invention, it may be preferred that said set of rules defined by at least one of said quality metrics classes comprises deciding an intra-coded frame of said at least one continuous media stream to be a good frame, if it is completely received at said client, and to be a corrupted frame otherwise, or deciding a predictively coded frame of said at least one continuous media stream to be a good frame, if it is completely received at said client and all of its prediction reference samples belong to good frames, or if at least a part of said frame is completely received, all prediction reference samples, for instance reference pixels

for video, of said completely received parts of said frame belong to good frames, and all concealed parts of said frame are considered as good, wherein concealed parts of said frame are obtained by applying an error concealment algorithm to lost or erroneous parts of a decoded version of said frame, and wherein said concealed parts are considered as good if an average boundary difference between said concealed parts and surrounding completely received and decoded parts of said frame is below a threshold. Said concealment may for instance comprise estimation of reconstruction of lost or erroneous pixels based on spatial and/or temporal ~~neighbours~~neighbors of said pixels. Said average boundary difference may quantify a sum of luminance differences between pixels at the edges of concealed parts. Said threshold may for instance be equal to 3.--

At page 18, please amend the paragraphs beginning at line 14 and ending on page 20, line 7 as follows:

~~--It is further proposed a~~A computer program is provided according to the invention with instructions operable to cause a processor to perform the above-mentioned method steps. Said computer program may for instance be run on a processor that is integrated in either said client or said server.

~~It is further proposed~~Further, a computer program product comprising a computer program with instructions operable to cause a processor to perform the above-mentioned method steps.

~~It is further proposed a~~A streaming system; is provided according to the invention comprising at least one client, and at least one server, wherein at least one continuous media stream is streamed to said at least one client, and wherein said streaming is controlled by a protocol that is operated between said at least one client and said at least one server, wherein at least one quality metric and a quality metrics class from a pre-defined set of at least two quality metrics classes are selected, and wherein the quality of said streaming based on said at least one selected quality metric and said selected quality metrics class is reported to said at least one server.

~~It is further proposed a~~In further accord with the present invention, a client is  
provided for a streaming system, comprising a device or means for operating a  
protocol that controls a streaming of at least one continuous media stream to said  
client, a selector or means for selecting at least one quality metric and a quality  
metrics class from a pre-defined set of at least two quality metrics classes, and  
a reporting device or means for reporting the quality of said streaming based on said  
at least one selected quality metric and said selected quality metrics class to a server.

~~It is further proposed a~~In still further accord with the present invention, a server is  
provided for a streaming system, comprising a device or means for operating a  
protocol that controls a streaming of at least one continuous media stream to a client,  
a selector or means for selecting at least one quality metric and a quality metrics  
class from a pre-defined set of at least two quality metrics classes, and a receiver or  
means for receiving a reported quality of said streaming from said client, wherein  
said quality is reported based on said at least one selected quality metric and said  
selected quality metrics class.

~~It is further proposed a protocol for a~~According still further to the present invention,  
a streaming system is provided, comprising rules for the control of a streaming of at  
least one continuous media stream to a client, a definition of at least one quality  
metric and of a set of at least two quality metrics classes, rules for the selection of at  
least one quality metric and of a quality metrics class from said set of at least two  
quality metrics classes, and rules for the report of a quality of said streaming based  
on said at least one selected quality metric and said selected quality metrics class to  
a server. Said protocol may for instance be the RTSP in combination with the SDP  
in the context of a 3G PSS system.--

At page 20, please amend the paragraph beginning at line 11 as follows:

--Brief description of the figures

In the figures show:--

At page 21, please amend the paragraphs beginning at line 10 and ending at line 24 as follows:

--For the present invention, the protocol stack of Fig. 1 and the feedback RTSP header as defined in Fig. 2b may still apply. However, a modified negotiation RTSP header 3 is defined, as listed in Fig. 3. The principle of the modification and the end result may be extended to other protocols.

The modified negotiation RTSP header 3 of Fig. 3 provides an additional RTSP field *Metrics-class*, which may either have the values "0", "1" or "2", for example.

During negotiation between the streaming client and the streaming server, thus not only the quality metric that is to be used in the subsequent quality feedback of the streaming client is agreed upon by ~~utilising~~utilizing the *Metrics* RTSP field of the modified negotiation RTSP header 3 of Fig. 3, but also the quality metrics class is negotiated by ~~utilising~~utilizing the *Metrics-class* RTSP field.—

At page 22, please amend the paragraph beginning at line 1 as follows:

--The present invention proposes, e.g., three different methods to judge whether frames of the continuous media stream that is streamed to the streaming client are good frames (otherwise they are considered as corrupted frames). Each of said respective methods is uniquely identified by one of the values "0", "1" and "2" that the *Metrics-class* RTSP field can be assigned. Assuming that the quality metric is at least partially based on the decision whether frames are good or corrupted frames, for instance if the quality metric is a corruption duration, the overall information content of the quality metric obeying the judging method according to the selected quality metrics class is much more concise and significant. Furthermore, a ~~specialisation~~specialization of the quality metric is achieved, because each quality metric at least partially based on a good frame decision ~~is now is-divided~~ into three quality metrics, each with a different good frame judging method.--

At page 22, please amend the paragraph beginning at line 19 as follows:

--In the ~~sequel of this~~ description that follows, the three exemplary judging methods as proposed by the present invention will be discussed.--

At page 23, please amend the paragraph beginning at line 25 as follows:

--The third method is characterized by applying a certain decoding quality evaluation algorithm. A possible embodiment of the third judging method will be described ~~in the sequel~~ subsequently.--

At page 31, please amend the paragraph beginning at line 27 and ending on page 32, line 17 as follows:

--The invention has been described above by means of a preferred embodiment. It should be noted that there are alternative ways and variations which ~~are obvious~~ will be evident to a skilled ~~any person in~~ of skill in the art and can be implemented without deviating from the scope and spirit of the appended claims. In particular, the quality metrics classes may be used to render the definition of any quality metric that is at least partially based on good frame decision more precisely and at the same time allow a ~~specialisation~~ specialization of said quality metric. For instance, quality metrics classes may provide different definitions of what is to be understood under a corruption itself, or may provide definitions for different degrees of frame corruptions, which then, in combination with a quality metric that at least partially depends on a definition of a corruption, allow for a much more concise reporting of streaming quality. The scope of the present invention is by no means restricted to application in third generation mobile communication system. Also application in different wireless and even wired streaming systems may be imagined.